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## A NEW SPECIES OF *CYAMOPS* MELANDER 1913 (DIPTERA: PERISCELIDIDAE) FROM JAPAN AND A REVIEW OF JAPANESE PERISCELIDIDAE

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Abstract.—Cyamops hotei Sueyoshi, a new species of Periscelididae, is described from Japan, and the Japanese species of Periscelididae are reviewed. In addition to *C. hotei,* four periscelidid species are reported, of which *Periscelis (Myodris) annulata* (Fallén) and *Stenomicra (Podocera) angustiforceps* Sabrosky are recorded from Japan for the first time. A key to all Japanese species and a distribution map are provided.

Key Words: Diptera, Periscelididae, Cyamops, new species, Japanese species

The Periscelididae are a small family of approximately 84 species in nine genera from all zoogeographic regions. The family is divided into two subfamilies: Periscelidinae and Stenomicrinae (Mathis and Papp 1998). Adults of both subfamilies are very small (2-2.5 mm), and those of Periscelis Loew and Stenomicra Coquillett have been collected at sap runs and grassy areas, respectively. Adults of Cyamops Melander have been collected near wet habitats (cf. streams, waterfalls, marshes, etc.) (Khoo 1985, Baptista and Mathis 1994). The larval biology of only a few periscelidid genera is known. The larvae of Periscelis breed in sap runs on trees, and a puparium of Cyamops and larvae of Stenomicra have been found in a bog and on banana, Gramineae, pineapple, and Pandanaceae, respectively (Ferrar 1987).

The genus *Cyamops*, which occurs worldwide, is assigned to the subfamily Stenomicrinae and currently includes 26 species (Baptista and Mathis 2000). Only six species are known from the Old World, however, and except for an unidentified species from Japan, no species are known from the Palearctic Region (Cyamops sp.: Tamaki 1997, as a member of Aulacigastridae, and Kubo 2000; Cyamops sp. 4: Baptista and Mathis 2000). Recently, we found specimens in good condition that represent the unidentified species in collections of the Forestry and Forest Products Research Institute. The specimens were collected in a Malaise trap and are part of the Diptera sampled in an insect survey of the Ogawa Forest Reserve (Ibaraki), a temperate forest in Honshu, Japan. Research and analysis of these collections are progressing (submitted), and description of this new species of Cyamops is needed for these studies. Moreover, we have also had a chance to examine all specimens previously listed in the above reports from Japan.

In this paper, we describe a new species of *Cyamops* from Japan as part of a taxonomic review of Japanese Periscelididae that includes a key and a distribution map for all Japanese species of the family. We also provide additional records of *Stenomicra albibasis* Sabrosky and *S. fascipennis* Malloch from Japan (Sabrosky 1965) and record *S. angustiforceps* Sabrosky and *Periscelis annulata* (Fallén) from Japan for the first time.

#### MATERIALS AND METHODS

A total of 301 specimens were examined. These are preserved dry except for some specimens in 80% ethanol. External structures were observed under a stereoscopic microscope; some male and female abdomens were removed and treated in 10% KOH solution at 40° C for 10 hours, stained with Chlorazol Black E, neutralized with acetic acid, washed in distilled water, and then observed in pure glycerol. Dissected abdominal structures are preserved in pure glycerol in plastic microvials pinned under the dried mounted specimen or enclosed together with other body parts in 80% ethanol. Right wings were slide-mounted in Euparal.

All specimens examined have a serial number label attached and are deposited in the Biosystematics Laboratory, Graduate Institute of Social and Cultural Studies, Kyushu University, Fukuoka (BLKU) (Pr.1001-1004, 1008-1246, 1248-1272, 1281–1285, 2005), the Forestry and Forest Products Research Institute, Tsukuba (FFPRI) (Pr.1005-1007, 1271), Tamaki's personal collection, Moroyama (Pr. 2003-2004, 2006–2012), the Smithsonian Institution, National Museum of Natural History, Washington, D.C. (Pr.3001-3014), and the Bernice P. Bishop Museum, Honolulu (Pr. 4001). Abbreviations of localities are as follows: C: City, P: Prefecture, T: Town, V: Village. Species with an asterisk are newly recorded from Japan. The terminology and abbreviations mostly follow McAlpine (1981), excluding terms exceptionally mentioned.

Cyamops hotei Sueyoshi, new species (Figs. 1a-h, 2a-b, d, 3a-b, 4)

*Cyamops* sp.: Tamaki 1997: 146; Kubo 2000: 378.

*Cyamops* sp. 4: Baptista and Mathis 2000: 504.

Male.—Head (Fig. 1a) higher than long; frons black in ground color, with velvet-like pruinescence; orbital plate, ocellar triangle, and vertex black in ground color, polished; face and gena yellow in ground color, with gravish pruinescence except narrow facial carina polished; face wide as distance between posterior ocelli (Fig. 2a); parafacial dark brown in ground color, covered with silvery pruinescence; occiput, and postgena covered with grayish pruinescence; clypeus yellow. Head chaetotaxy: 2 orbital, 1 vertical (inner vertical seta absent), 2 paravertical, 10 postocular, 9–10 peristomal, 1 genal, 2 postgenal setae, all black; ocellar, postocellar. Antenna: scape, pedicel, and postpedicel (Stuckenberg 1999; 1st flagellomere: McAlpine 1981) yellow in ground color; arista black, with 12 dorsal and 3 ventral branches; pedicel with several setae on anterior margin. Mouthparts yellow.

Thorax entirely dark brown in ground color, covered with sparse grayish pruinescence except for polished propleural lobe. Thoracic chaetotaxy: 2 dorsocentral, 2 notopleural, 1 katepisternal, 1 supra-alar, 1 postalar and 2 scutellar setae all black; postpronotal, anepisternal, and anepimeral setae absent; minute dorsocentral setulae anterior to dorsocentral setae present; 2 rows of minute acrostichal setulae on presutural region present.

Wing (Fig. 2d) generally hyaline, 3.5 times long as wide, broadly infuscate dark brown on apices of cell  $r_{2+3}$ ,  $r_{4+5}$ , and m, and along veins  $R_{4+5}$  and  $CuA_1$ ; veins dark brown; vein  $R_{2+3}$  slightly sinuate. Halter yellow in ground color, with dark brown knob.

Legs entirely yellow except apex of hind femur, apex of 4th tarsomere, and 5th tar-



Fig. 1. *Cyamops hotei*, male (holotype). a, Head in left lateral view. b, 4–5th abdominal segments and postabdomen in ventral view. c, Epandrial complex (epandrium, surstylus, and cerci) in caudal view. d, Epandrial complex in left lateral view. e, Epandrial complex in anterior view. f, Hypandrial complex (hypandrium, gonites, and phallapodeme) in ventral view. g, Phallus in left lateral view. h, Phallus in caudal view. Abbreviations: bp: basiphallus; dp: distiphallus; ep: epandrium; hyp: hypandrium; or: orbital seta; ov: outer vertical seta; pa: phallapodeme; pp: posterior process of S6–7; prg: pregonite; s: surstylus; 4–6S: 4–6th abdominal sternites; 4–7T: 4–7th abdominal tergites. Scale bars: a = 0.50 mm; b–f = 0.10 mm.

somere dark brown; no distinct setae and spines.

Abdomen entirely dark brown; S6-7 (Baptista and Mathis 1994; 6th sternite: Khoo 1985) with distinct posterior process (Fig. 1b: pp) and largely expanded as semicircular plate anteriorly. Genitalia (Fig. 1ch): epandrium (Fig.1c-e: ep) spherical; both surstyli (Cumming et al. 1995; posterior surstylus: McAlpine 1981) (Fig. 1c-e: s) asymmetrical, right surstylus short, bowllike, left surstylus long, hoe-like, with abrupt apex; hypandrium (Fig. 1f) asymmetrical, right pregonite (Fig. 1f: prg) bowl-like, left pregonite (Fig. 1f: prg) hilllike with 3 short longitudinal ridges; phallus (Cumming et al. 1995; aedeagus: McAlpine 1981) (Fig. 1g-h) consisting of some sclerites; basiphallus (Fig. 1g-h: bp) cylindrical, with longitudinal projection anteriorly; distiphallus (Fig. 1g-h: dp) consisting of 2 transverse strap-like sclerites, large sclerite expanded apically, terminated with cylindrical apex and sclerite with hook.

Body length 2.7 mm (anterior apex of head to posterior margin of abdomen). Wing length (base of costa to apex of vein  $R_{4+5}$ ) 2.1 mm; width 0.7 mm.

Female.—Similar to male but with sexual dimorphism in head, fore femur, and wing markings: head (Fig. 3a) entirely black in ground color without yellow regions; frons, parafacial, gena, occiput, and postgena covered with grayish pruinescence; facial carina broad as distance be-



Fig. 2. Heads and wings of Japanese Periscelididae. a–b. Head in anterior view. c–g, Right wing in dorsal view. a, *Cyamops hotei*, male (holotype). b, *C. hotei*, female (Pr. 1004). c, *Periscelis annulata* (Pr. 1001). d, *C. hotei* (holotype). e, *Stenomicra albibasis* (Pr. 1014). f, *S. fascipennis* (Pr. 1008). g, *S. angustiforceps* (Pr. 1029).

tween outside of antennae (Fig. 2b); lateral corner of face and gena covered with silvery pruinescence; clypeus (Fig. 3a: cl) black; scape, pedicel, and basal part of postpedicel black, distal part of postpedicel orange; wing broadly infuscate, dark brown along apex of veins  $R_{2+3}$ ,  $R_{4+5}$ , M, and  $CuA_1$ , apical infuscation of wing reaching cell  $r_1$ ; anteroventral side of femur with row of minute spine-like setae. Postabdominal structures (Fig. 3b): T6 fused with S6, forming ring-shaped 6th syntergosternite (Fig. 3b: 6ST) (Baptista and Mathis 1994); T7 separate from S7; T8 long as T5, S8 membranous, attached to S7; T10 (10th abdominal tergite: Griffiths 1981; epiproct: McAlpine 1981) and S10 (10th abdominal sternite: Griffiths 1981; hypoproct: Mc-Alpine 1981) triangular; cercus short (Fig. 3b: c). Two spherical spermathecae (Fig. 3b: sp).

Specimens examined.—Holotype &. (Tamaki's personal collection): "South hill of Hiki/Ogose Town/Iruma, Saitama Pref./ 11.v.1993/N. Tamaki leg.", lime green circle, "Pr. 2005", "Holotype/Cyamops/hotei/



Fig. 3. *Cyamops hotei*, female (Pr. 1004). a, Head in left lateral view. b, Postabdomen in left lateral view. Abbreviations: c: cerci; cl: clypeus; or: orbital seta; ov: outer vertical seta; sp: spermatheca; 6ST: 6th synter-gosternite; 7–10S: 7–10th abdominal sternites; 7–10T: 7–10th abdominal tergites.

Sueyoshi" (red label). Paratypes:  $3 \delta 6 \varphi$ , HONSHU. Ibaraki P:  $1 \delta$ , Ogawa, Kitaibaraki C, 27.vi–9.vii.1996 (Pr. 1005);  $1 \varphi$ , same locality, 25.vii–6.viii.1996 (Pr. 1007);  $2 \varphi$ , same locality as holotype, 9– 25.vii.1996 (Pr. 1006, 1271). Kanagawa P:  $1 \varphi$ , Hitorizawa, Yokohama C, 29.v.1999 (Pr.2006);  $1 \varphi$ , Koajiro, Miura C, 12 vi 1995 (Pr. 1272). Saitama P:  $1 \varphi$ , Mt. Arima, Chichibu C, 14.vii.2001 (Pr. 1004);  $1 \varphi$ , Minowada, Moroyama T, 3.vi.1994 (Pr. 2003);  $1 \delta$ , same locality, 17.vi.1994 (Pr. 2004). KYUSHU. Oita P:  $1 \delta$ , Beppo (= Beppu), 21.vi.1952 (Pr. 3001).

Distribution.—Japan (Honshu and Kyushu: Fig. 4).

Etymology.—The specific epithet is derived from the Japanese noun Hotei, meaning a Buddhist priest from China who has a fan and pouch in his hands, alluding to the flat and pouchlike surstyli of this species.

Remarks.—This species is distinguished from congeners by the following combination of characters: anteroventral portion of male eye with enlarged facets (Fig. 2a); wing cell  $R_{2+3}$  broadly hyaline and with dark brown marking at apex (Fig. 2d); fore femur with ventral seta at base; anterior scutellar seta well developed; hind femur with apical dark marking; and female abdominal tergite and sternite 7 separate (Fig. 3b). This species is very similar to C. banvaneue Baptista and Mathis in wing markings but differs from the latter species by having dark markings on the male hind femur restricted to the apical  $\frac{1}{5}$ , and the left surstylus is not bifurcate and terminated at abrupt apex (Fig. lc, e). Cyamops hotei is also similar to C. Iaos Baptista and Mathis in male genital structures but differs from it by the wing cell  $R_{2+3}$  without a distinct white region at middle (Fig. 2d), and the male left surstylus is abrupt at its apex (Fig. lc, e: s).

Tamaki (1997) recorded an undetermined species of *Cyamops* from Japan for the first time and Kubo (2000) also reported a male belonging to this genus. We examined all four specimens they reported and found that they belong to this new species. The male specimen of *Cyamops* sp. 4 (recorded in Baptista and Mathis 2000) was also examined and found to be conspecific with *C. hotei*.

Baptista and Mathis (1994) documented the monophyly of *Cyamops* with eight autapomorphies: absence of inner vertical seta, middle of frons concave, side of frons below orbital plate silvery shiny, male clypeus retracted and tending to fill oral opening, both of surstyli asymmetrical, phallus with complex sclerites, female abdominal tergite and sternite 6 fused and forming a complete ring. Cyamops hotei has all of these characters and is thus a member of this monophyletic group. Baptista and Mathis (1994) also proposed three synapomorphies that support some subgroups within Cvamops, and C. hotei has two of them: anteroventral facets of male eye enlarged and presence of spine-like short setae on female fore femur. Cyamops hotei has two spermathecae (Fig. 3b: sp), a condition that Baptista and Mathis (1994) consider plesiomorphic. These authors suggested another five characters as potential synapomorphies of subgroups, although their polarities were not determined. Among these five synapomorphies, we observed the following in C. hotei: female abdominal tergite and sternite 7 separate (Fig. 3b); 2 pairs of dorsocentral setae posterior to transverse suture present; 2 pairs of scutellar setae present; anepisternal setae absent; wing crossvein bM-Cu present (Fig. 2d).

#### RECORDS OF JAPANESE SPECIES OF PERISCELIDIDAE

Periscelis (Myodris) annulata (Fallén) (Fig. 2c, 4)

Notiphila annulata Fallén 1813: 250. Periscelis annulata: Loew 1858: 118 [generic combination].

Specimens examined.—HONSHU. Ibaraki P: 1 &, Ogawa, Kitaibaraki C, 25.vii– 9.viii.1996 (Pr. 1003); 1 & 1  $\degree$ , same locality, 21.v.2002 (Pr. 1001–1002). Tokyo: 1  $\degree$ , Tama Forest Science Garden, Hachioji C, 14–29.v.2002 (Pr. 1281); 2  $\degree$ , same locality, 10–22.vii.2002 (Pr. 1282–1283); 1  $\degree$ , same locality, 22.vii–26.viii.2002 (Pr. 1284); 1  $\degree$ , Sugawara Shrine, Machida C, 15–29.vi.2002 (Pr. 1285).

Distribution.—Europe (Duda 1934) and Japan (Honshu: Fig. 4).

Remarks.—This species is distinguished from congeners of the subgenus *Myodris* Lioy by the following combination of characters: scutum covered with grayish pruinescence and with 3 longitudinal dark brown stripes; face with distinct medial bulging and facial carina; wing without distinct dark markings; thorn of male cerci subapical; left surstylus as long as right surstylus; postgonite gradually tapered to apex. This species is very similar to *P. (M.) kabuli* Papp but differs from the latter species by the above genital characters (Papp 1988).

## Stenomicra (Podocera) albibasis Sabrosky (Fig. 2e, 4)

#### Stenomicra albibasis Sabrosky 1965: 214.

Specimens examined.—HONSHU. Ibaraki P: 1  $\Im$ , Ogawa, Kitaibaraki C, 19.vi.2002 (Pr. 1010); 1  $\Im$ , Okami Marshy, Satomi V, 18.v.2001 (Pr. 1008); 1  $\Im$ , same locality, 14.v.2002 (Pr. 1009). Kanagawa P: 2  $\Im$  9  $\Im$ , Mt. Enkai, Yokohama C, 21.vii.2002 (Pr. 1011–1021).

Distribution.—Japan (Honshu: Sabrosky 1965) (Fig. 4).

Remarks.—This species is distinguished from congeners by the following combination of characters: wing slightly infuscate, yellow except for basal  $\frac{1}{5}$ , with small black markings at apex and base of vein  $R_1$ , base of vein  $R_{2+3}$ , and base of alula (Fig. 2e); wing vein  $R_{2+3}$  terminated near wing apex (Fig. 2e); anterior orbital seta as long as posterior orbital seta; head entirely dark brown in ground color, covered with grayish pruinescence. This species resembles S. bicolor Sabrosky from Rèunion and S. nigricolor Sabrosky from Kenya in having a black head and thorax. However, it differs from S. bicolor by having entirely yellow legs, and from S. nigricolor by having an entirely yellow abdomen (Sabrosky 1975).

### Stenomicra (Podocera) fascipennis Malloch (Fig. 2f, 4)

Stenomicra fascipennis Malloch 1927: 26. Stenomicra sp. 1: Tamaki 1997: 147.



Fig. 4. Distribution maps of Japanese periscelidid species. a,  $\bigcirc$  *Cyamops hotei*;  $\blacklozenge$  *Periscelis annulata*,  $\blacksquare$  *Stenomicra albibasis*,  $\blacktriangle$  *S. angustiforceps*.

Specimens examined.—HONSHU. Ibaraki P: 1 &, Okami Marshy, Satomi V, 14.v.2002 (Pr. 1069). Kanagawa P: 1  $\Im$ , Mt. Enkai, Yokohama C, 16.vii.2001 (Pr. 1269); 1 & 1  $\Im$ , same locality, 16.v.2002 (Pr. 1067–1068); 3 &, same locality, 27.vi.2002 (Pr. 1058–1060); 5 ♂ 1 ♀, same locality, 28.vi.2002 (Pr. 1061–1066); 15 ♂ 11 ♀, same locality, 21.vii.2002 (Pr. 1070–1095). Saitama P: 6 ♂ 8 ♀, Mt. Arima, Chichibu C, 14.viii.2001 (Pr. 1045–1057, 1270); 2 ♂, Kanao, Yorii T, 28.v.1995 (Pr. 2010–2011);

1 <sup>Q</sup>, Omaeda, Hanazono T, 28.v.1995 (Pr. 2007); 1 ♂ 1 ♀, same locality, 15.vii.1995 (Pr. 2008–2009). Tochigi P: 1 ♂ 1 ♀, Yusen Gorge, Nasu T, 29.ix.2001 (Pr. 1043-1044). Tokyo Metropolis: 2 ♂ 6 ♀, Tokyo, 8.iv.1953 (Pr. 3002-3009). Shizuoka P: 1 д, Gotemba C, 9.х.1952 (Pr. 3010). Куото P: 1 & 3 9, Kibune, Kyoto C, 10.v.1953 (Pr. 3011–3014). RYUKYUS. 20 ♂ 25 ♀, Oku, Kunigami V, 27.vi.2001 (Pr. 1096-1139, 1042); 2 & 2 9, Okuyona Pass, Kunigami V, 27.vi.2001 (Pr. 1159-1162); 10 ∂ 13 ♀, same locality, 16.vii.2002 (Pr. 1140-1158, 1169-1172); 1 d, Yona, Kunigami V, 21.iii.1997 (Pr. 1163); 2 9, same locality, 25.vi.2001 (Pr. 1164-1165); 1 & 2 9, same locality, 16.vii.2002 (Pr. 1166-1168); 2 ♂ 1 ♀, Gyoba, Ogimi V, 17.vii.2002 (Pr. 1173–1175); 1 ♀, Oura, Nago C, 17.iv.1996 (Pr. 1188); 7 ♂ 12 ♀, same locality, 28.vi.2001 (Pr. 1176-1187, 1189–1195); 3 ♂ 4 ♀, Gogayama, Nakijin V, 17 vii 2002 (Pr. 1205–1211); 5 ♂ 3 ♀, Okawa, Nago C, 18 vii 2002 (Pr. 1196-1203); 1 d, Sesoko, Motobu T, 17.vii.2002 (Pr. 1204). OGASAWARA. 1 ♀ Senzan, Ogasawara V, 28 v 1958 (Pr. 4001); 15 ♂ 18 9, Mt. Mikazuki, Ogasawara V, 26.vi.2002 (Pr. 1212-1244); 1 9, Higashi Kaigan, Ogasawara V, 30.vi.2002 (Pr. 1245); 6 3 9, Kitafukurozawa, Ogasawara V, (Pr. 1246, 1248–1255); 5 ♂ 2 ♀, Kita Bay, Ogasawara V, 4.vii.2002 (Pr. 1256-1262); 2 3 4 9, Mt. Sakai, Ogasawara V, 5.vii.2002 (Pr. 1263-1268).

Distribution.—India, Ceylon, Nepal, Malaya, Taiwan, Philippines, Borneo, Guam, Solomon, Fiji, Hawaii (Sabrosky 1977, Khoo and Sabrosky 1989) and Japan (Ogasawara, Honshu: Sabrosky 1965; and Ryukyus) (Fig. 5).

Remarks.—This species is distinguished from congeners by the following combination of characters: head entirely yellow in ground color, covered with grayish pruinescence; wing infuscate, dark yellow, with 4 hyaline transverse bands (Fig. 2f); wing vein  $R_{2+3}$  terminated near wing apex (Fig. 2f); anterior orbital seta as long as posterior orbital seta. This species is very similar to *S. biconspicua* Sabrosky from South Africa in having four band-like white markings of the wing but differs from the latter by its slender and strongly curved surstylus (cf. Sabrosky 1965: fig. 5, Sabrosky 1975: fig. 10).

Sabrosky (1965) examined 13 specimens from Tokyo, Shizuoka, and Kyoto prefectures and recorded this species from Japan for the first time. We examined all of these specimens as part of this study. Tamaki (1997) reported six specimens of *Stenomicra* sp. 1. We examined these specimens and found that five are this species.

The mesonotum and abdominal dorsum of this species are typically dark colored (i.e. black or brown) (Malloch 1927, Sabrosky 1965), and the specimens from Honshu and the Ryukyus correspond well to this description, but not the specimens from Ogasawara. The mesonotum and abdominal dorsum of specimens from Ogasawara are predominately yellow brown and paler than those from Honshu and the Ryukyus. The male postabdomen is also distinctly yellow. Although we could assign the specimens from Ogasawara as a distinct species from S. fascipennis, we have identified them as conspecific because there are no distinct differences, including structures of the male genitalia, between the specimens examined except for the body color as noted.

#### Stenomicra (Stenomicra) angustiforceps Sabrosky (Figs. 2g, 4)

Stenomicra angustiforceps Sabrosky 1965: 216.

Stenomicra sp. 2: Tamaki 1997: 147.

Specimens examined.—HONSHU. Kanagawa P: 3 & 7  $\,^{\circ}$ , Mt. Enkai, Yokohama C, 21.vii.2002 (Pr. 1022–1031). Saitama P: 1  $\,^{\circ}$ , Iwai, Moroyama T, 27.vi.1995 (Pr. 2012). RYUKYUS. 5 & 2  $\,^{\circ}$ , Oura, Nago C, 28.vi.2001 (Pr. 1035–1041); 3  $\,^{\circ}$ , Oku, Kunigami V, 27.vi.2001 (Pr. 1032–1034).

Distribution.—Nepal (Sabrosky 1965),



Fig. 5. Distribution of Stenomicra fascipennis Malloch.

India (Sabrosky 1977), and Japan (Honshu and Ryukyus: Fig. 4).

Remarks.—This species is distinguished from congeners by the following combination of characters: wing entirely hyaline (Fig. 2g); wing vein  $R_{2+3}$  terminated before wing apex (Fig. 2g); anterior orbital seta distinctly shorter than posterior orbital seta; postocellar seta present; scutum scarcely covered with whitish pruinescence, yellow in ground color, with pair of longitudinal brown vittae laterad of dorsocentral seta; postabdomen yellow.

Tamaki (1997) reported Stenomicra sp. 2

based on a female specimen. We examined his specimen and found that it belongs to this species.

#### Key to Japanese Species of Periscelididae

# (Modified from Sabrosky 1965 and Mathis and Papp 1998)

1. Two pairs of orbital setae present (Fig. 1a); ocellar seta absent; wing costa extended to apex of vein M (Fig. 2d–g); postpronotal lobe without distinct setae

2

- One strong pair of orbital setae present (Mathis and Papp 1998: fig. 24.1); ocellar seta present; wing costa extended to apex of vein R<sub>4+5</sub> (Fig. 2d); postpronotal lobe with distinct setae .... *Periscelis annulata*
- Orbital setae reclinate or lateroclinate (Grimaldi and Mathis 1993: figs. 15, 17); inner vertical seta present; supra-alar seta absent; wing crossvein bM-Cu absent, wing cells bm and dm confluent; wing cell cup absent (Fig. 2e-g) .... 3
- Anterior orbital setae proclinate and posterior orbital setae reclinate (Fig. 1a); inner vertical seta absent; supra-alar seta present; crossvein bM-Cu present, wing cells bm and dm separate (Fig. 2d), wing cell cup present . . Cyamops hotei

- 4. Wing infuscate, light gray, with four transverse hyaline bands (Fig. 2f) . . *Stenomicra fascipennis*
- Wing infuscate, light yellow, with hyaline at basal <sup>1</sup>/<sub>5</sub> (Fig. 2e) . . . . . . Stenomicra albibasis

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